

Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

Background

The Nebraska Department of Health and Human Services is collaborating with the University of Nebraska-Lincoln, University of Nebraska Medical Center College of Public Health, and wastewater utilities across Nebraska to monitor SARS-CoV-2 virus in wastewater. SARS-CoV-2 (the virus that causes COVID-19) is shed in feces by infected individuals. Virus concentrations in wastewater can be measured by sampling wastewater in community treatment plants. This information can give insight into the trends of COVID-19 in communities served by the treatment plant.

Wastewater surveillance data could serve as an early warning to public health officials about increases or decreases in COVID-19 cases within a community that could help with more effective resource deployments. Public health departments can use the wastewater data along with other surveillance data to evaluate trends to inform public health response.

About the Data

Wastewater surveillance is an emerging public health tool. Measuring SARS-CoV-2 concentrations in wastewater might correlate with increasing or decreasing infections in people but cannot be reliably used to estimate or predict community transmission levels.

Data in this report are preliminary and may be revised. This report will be updated regularly to provide additional information to public health partners regarding trends in virus prevalence in Nebraska's communities. The format of this report might change as our understanding of wastewater surveillance grows.

Note: NeWSS has switched to a new and more sensitive test for quantifying virus concentrations. Starting the week of 5/9, historic data have been updated to reflect the new testing method. Therefore, concentrations will differ slightly from previously reported data, but overall trends remained the same.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Sampling Locations

Facility Name	County (primary)	Local Health Department	Estimated Population Served
Missouri River WWTP	Douglas	Douglas	200000
Papillion Creek WWTP	Douglas	Douglas	600000
Theresa Street WWTP	Lancaster	Lincoln/Lancaster	200000
Northeast WWTP	Lancaster	Lincoln/Lancaster	100000
Fremont WWTP	Dodge	Three Rivers	28000
Columbus WWTP	Platte	East Central	23000
Norfolk WWTP	Madison	Elkhorn Logan Valley	27000
Wayne WWTP	Wayne	Northeast	5560
Grand Island WWTP	Hall	Central	52000
Atkinson WWTP	Holt	North Central	1243
Hastings WWTP	Adams	South Heartland	24692
Kearney WWTP	Buffalo	Two Rivers	33790
North Platte WWTP	Lincoln	West Central	24000
Scottsbluff WWTP	Scotts Bluff	Panhandle	15932
Chadron WWTP	Dawes	Panhandle	5561

Resources

CDC National Wastewater Surveillance System:

<https://www.cdc.gov/healthywater/surveillance/wastewater-surveillance/wastewater-surveillance.html>

Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

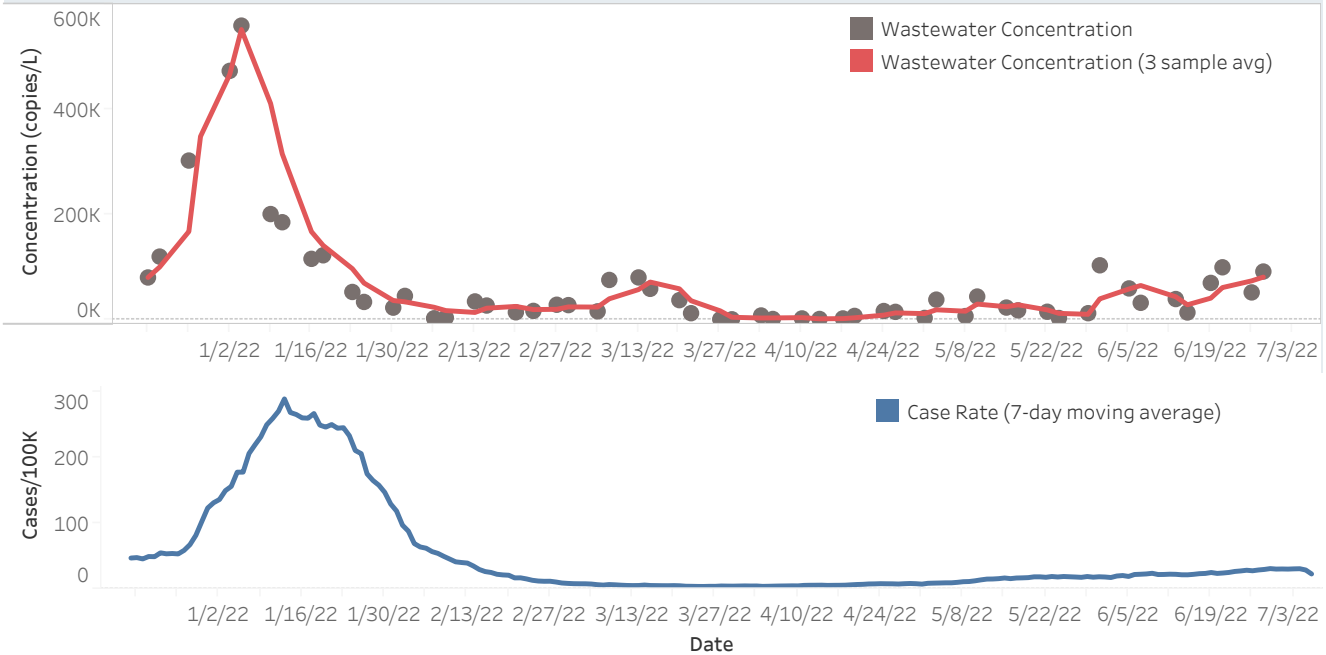
Top chart: Wastewater SARS-CoV-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

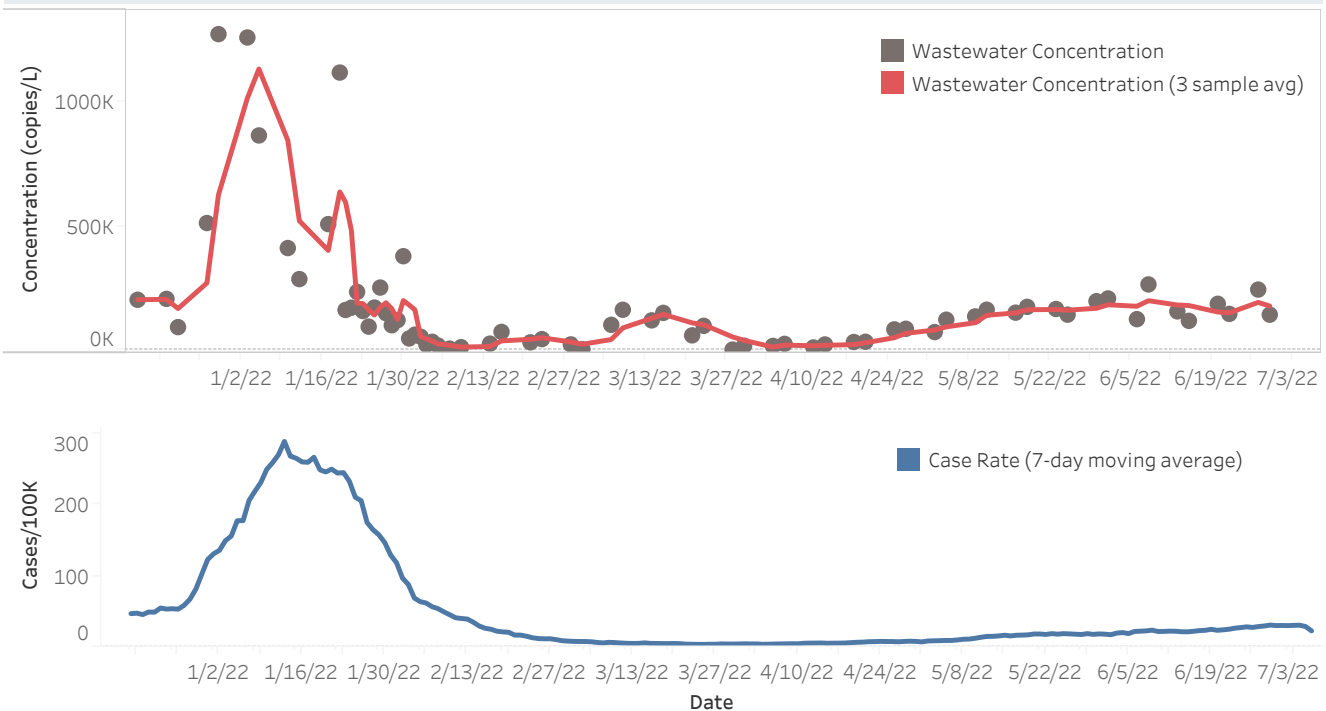
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Missouri River WWTP (Douglas County): SARS-CoV-2 in Wastewater and County Case Rates



Papillion Creek WWTP (Douglas County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

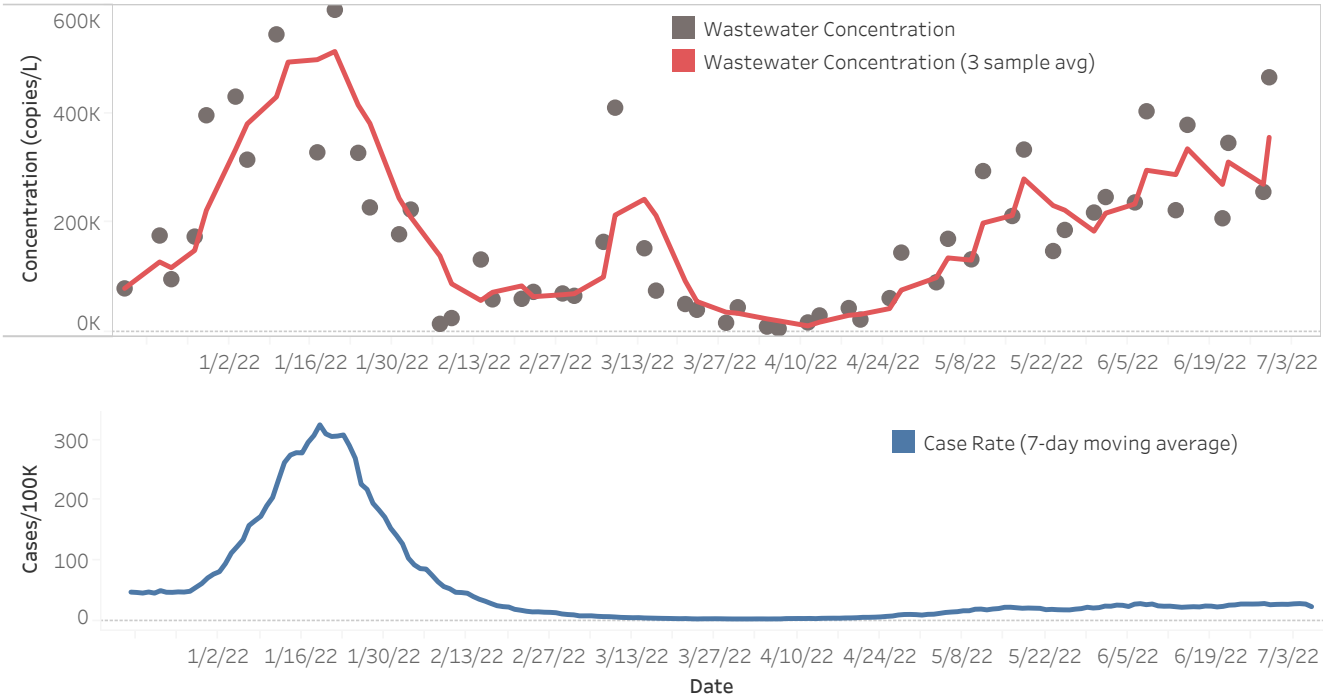
Top chart: Wastewater SARS-CoV-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

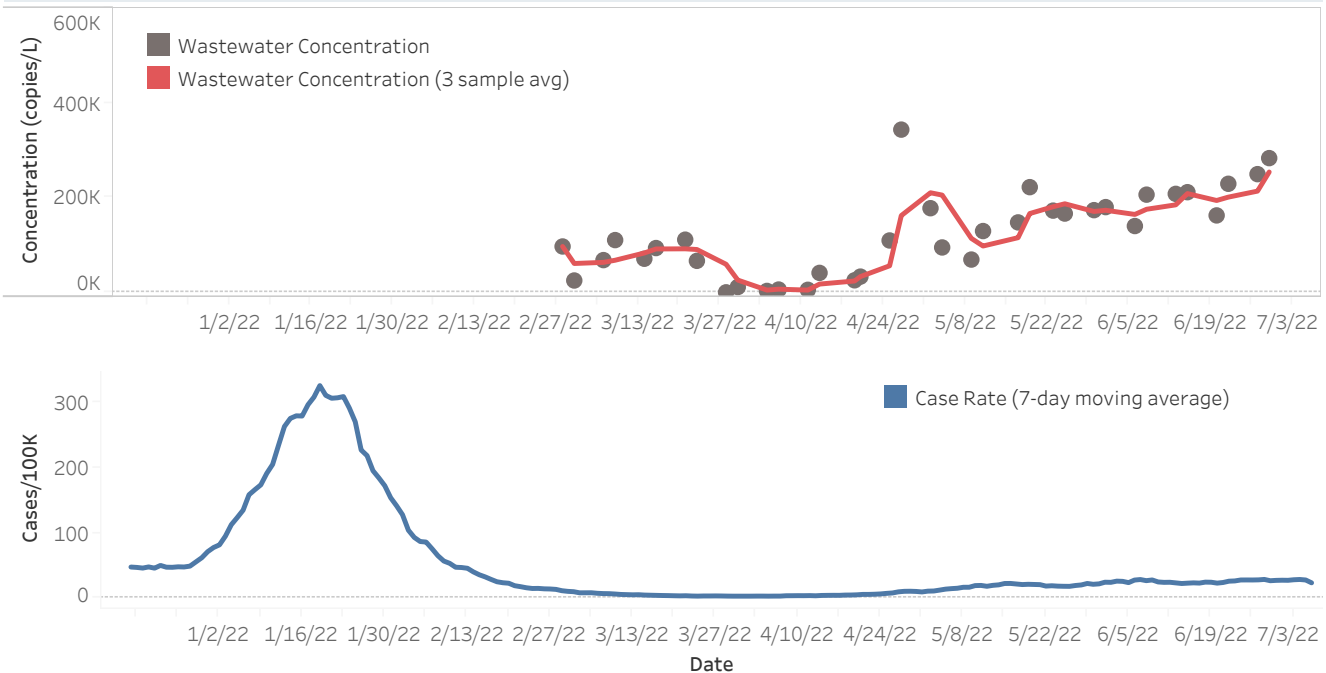
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Theresa Street WWTP (Lancaster County): SARS-CoV-2 in Wastewater and County Case Rates



Northeast WWTP (Lancaster County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

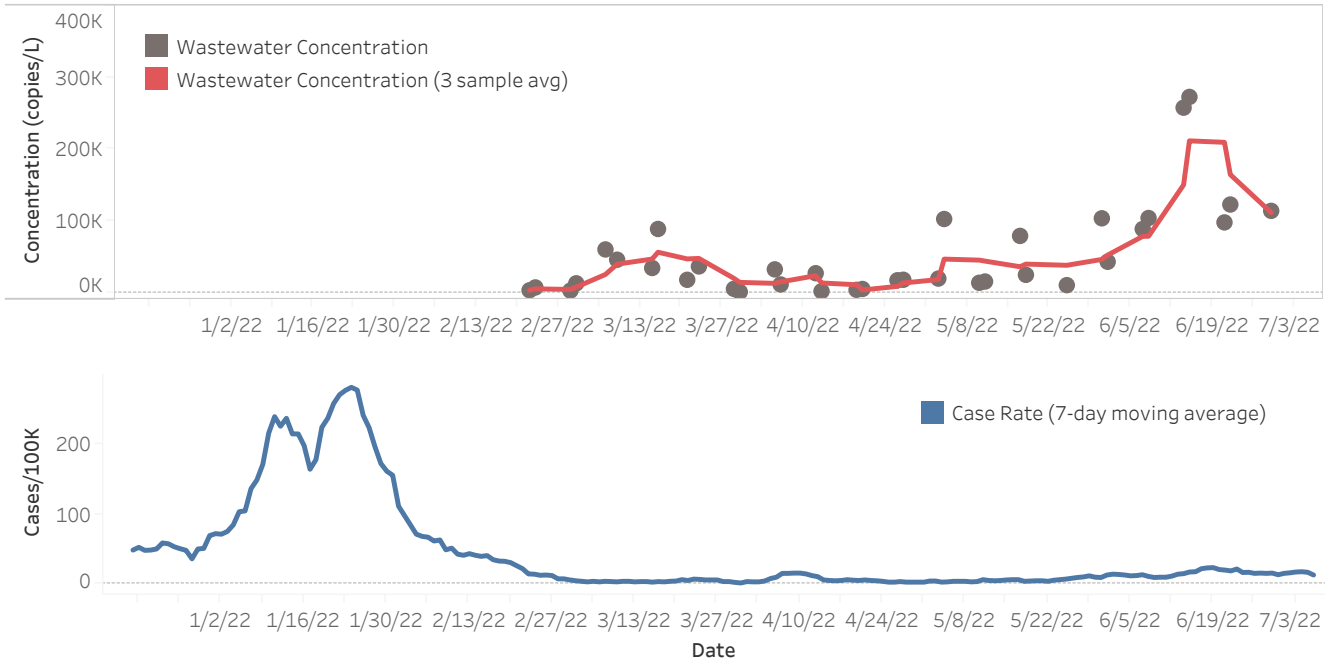
Top chart: Wastewater SARS-Cov-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

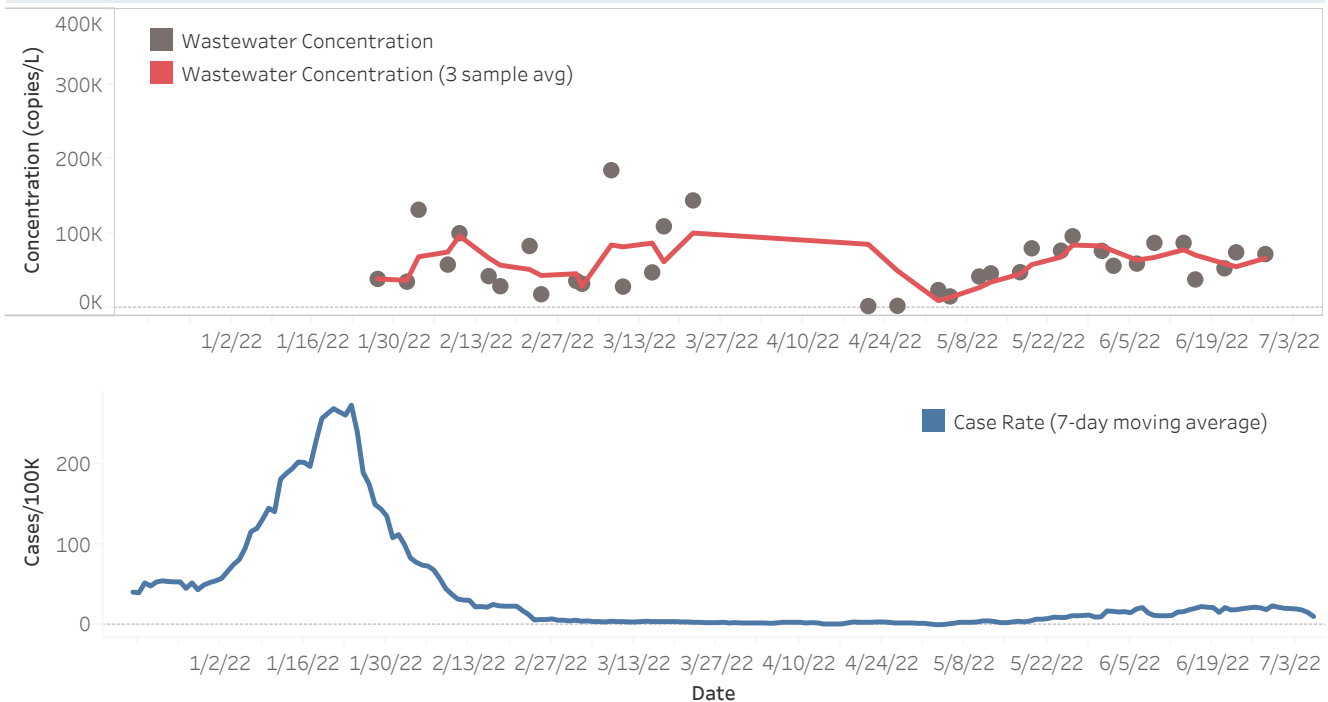
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Fremont WWTP (Dodge County): SARS-CoV-2 in Wastewater and County Case Rates



Columbus WWTP (Platte County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

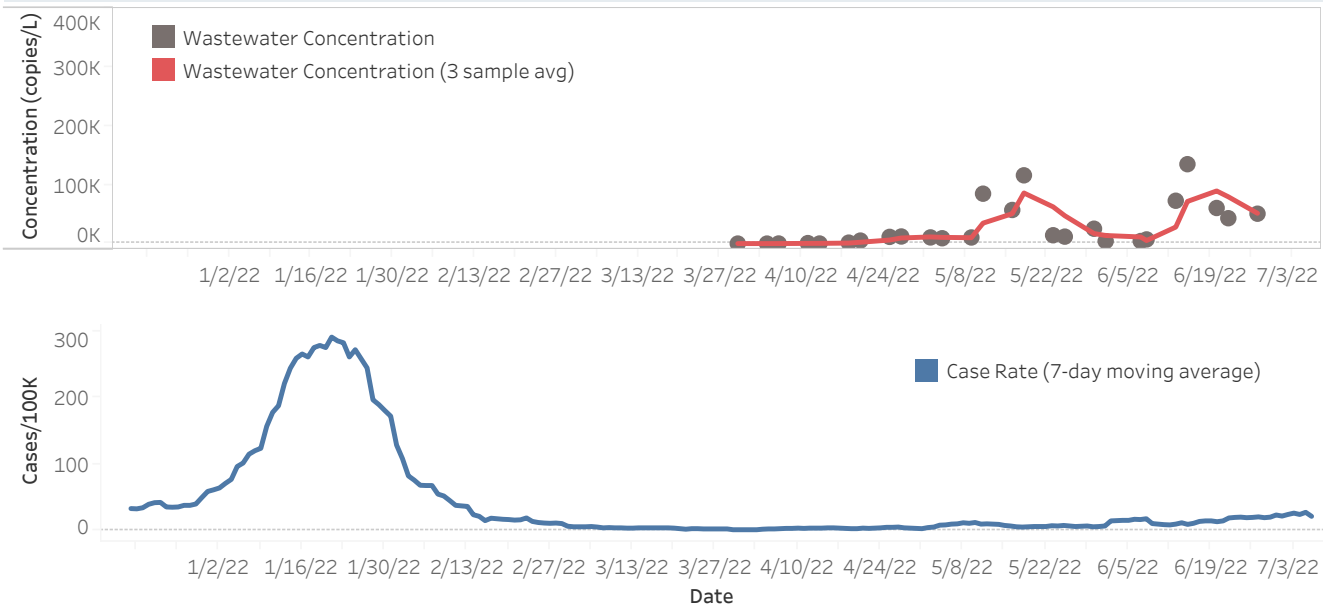
Top chart: Wastewater SARS-CoV-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

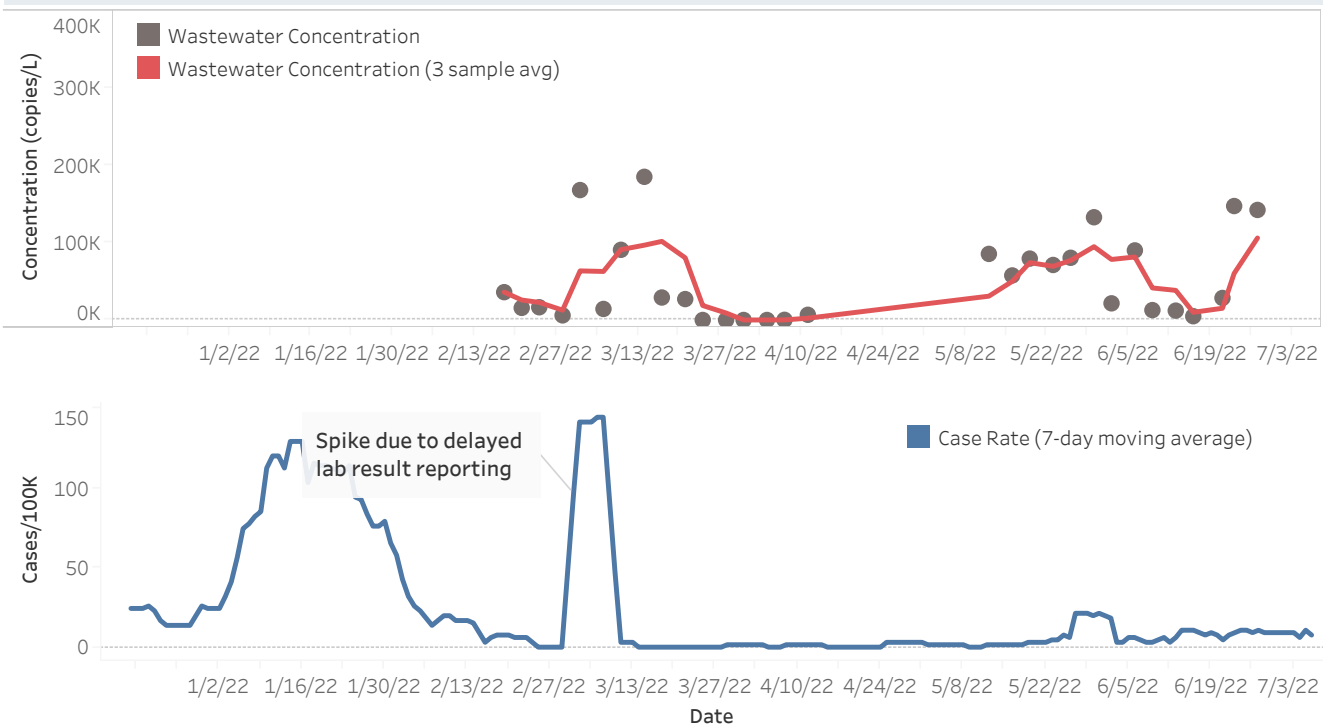
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Norfolk WWTP (Madison County): SARS-CoV-2 in Wastewater and County Case Rates



Wayne WWTP (Wayne County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

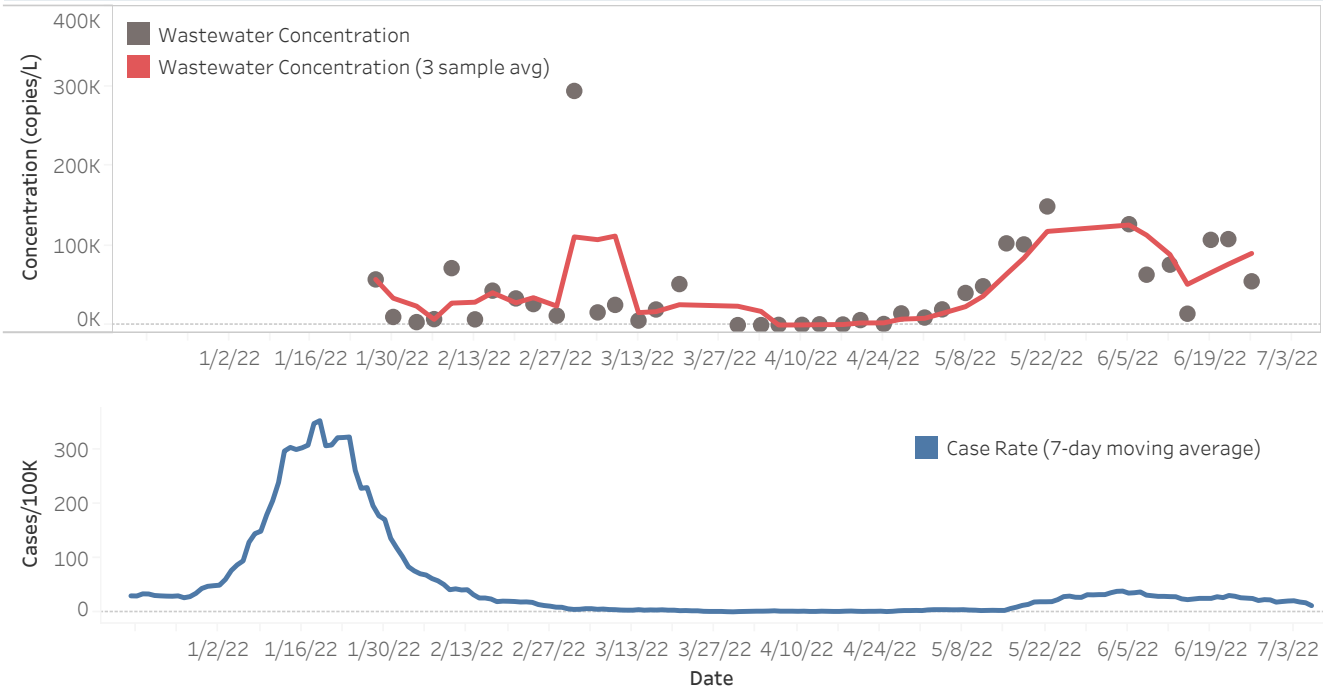
Top chart: Wastewater SARS-CoV-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

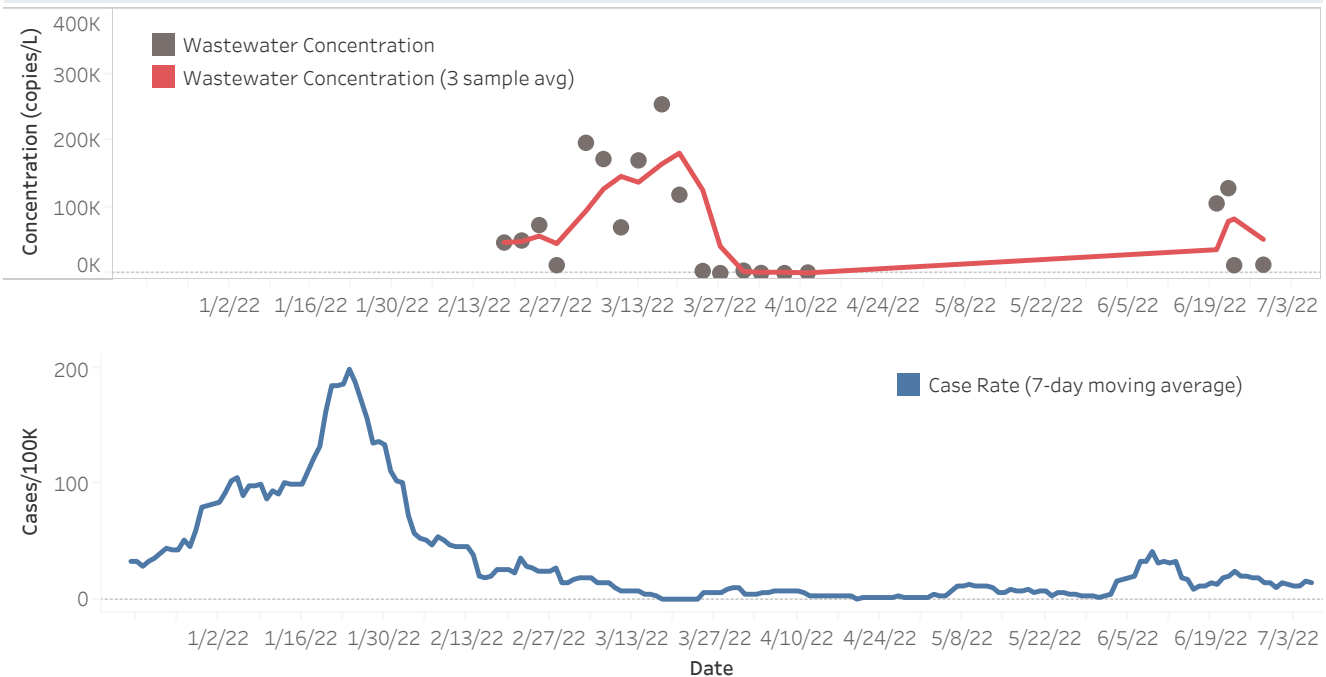
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Grand Island WWTP (Hall County): SARS-CoV-2 in Wastewater and County Case Rates



Atkinson WWTP (Holt County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

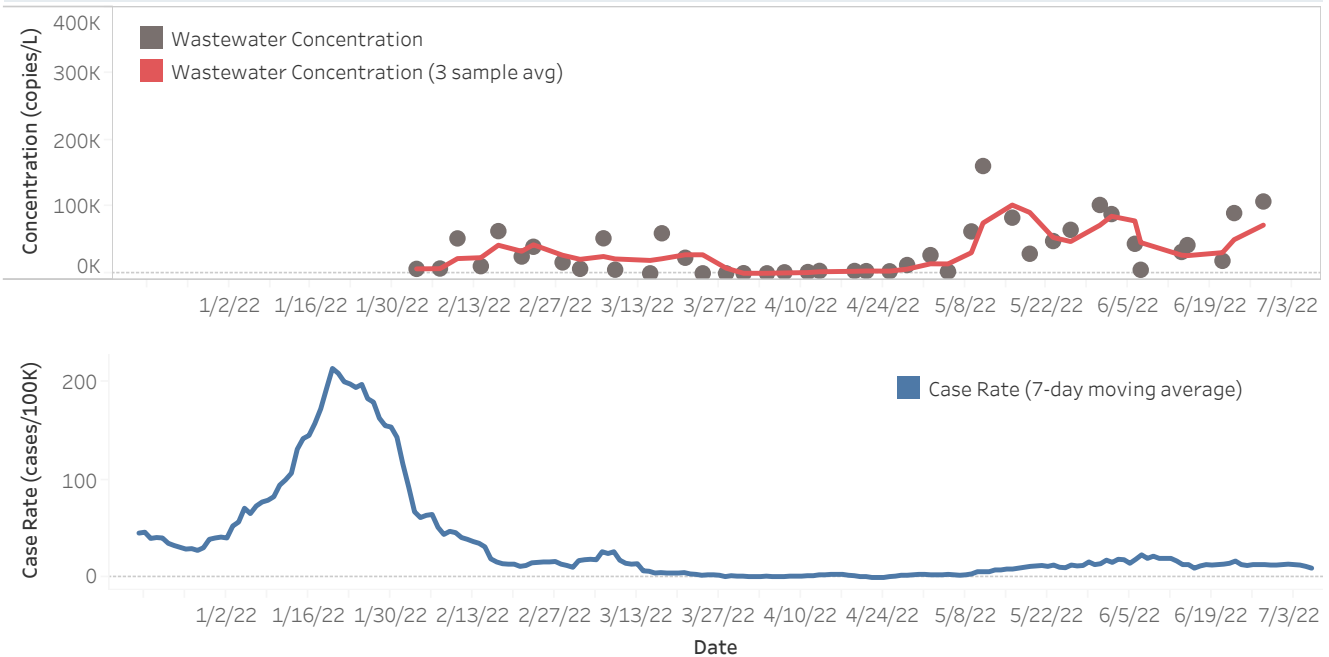
Top chart: Wastewater SARS-CoV-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

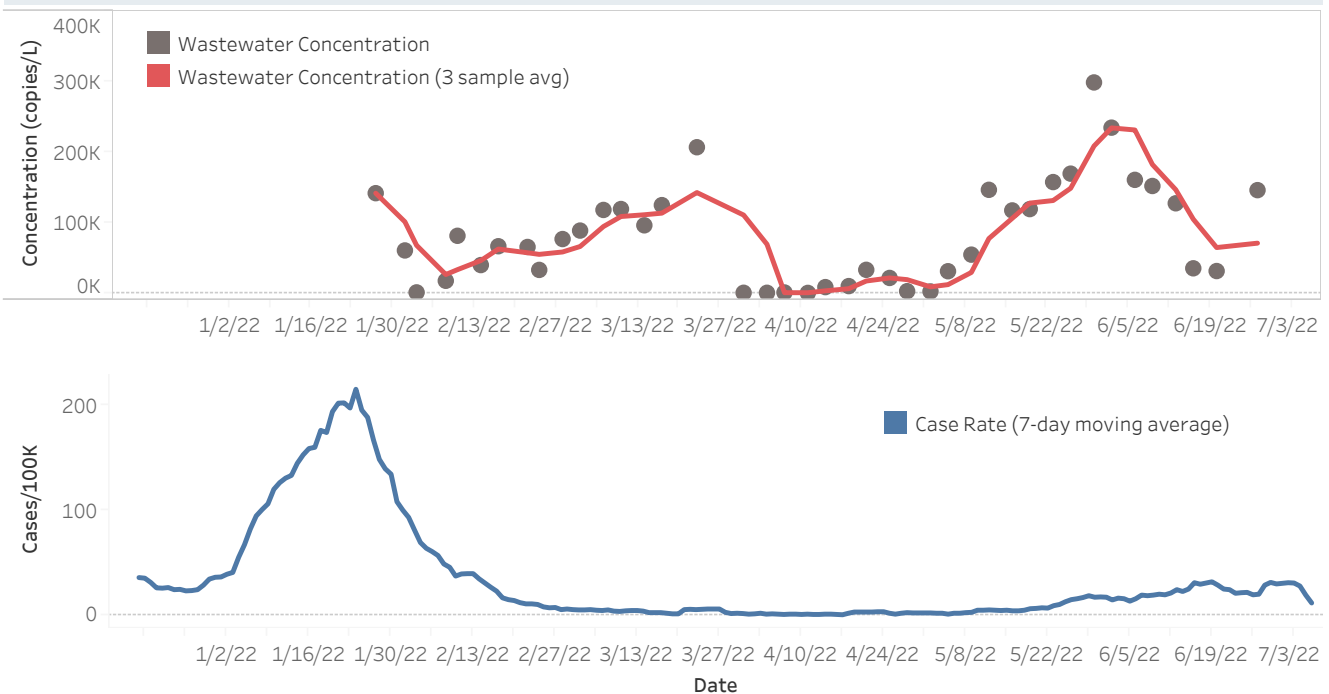
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Hastings WWTP (Adams County): SARS-CoV-2 in Wastewater and County Case Rates



Kearney WWTP (All County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

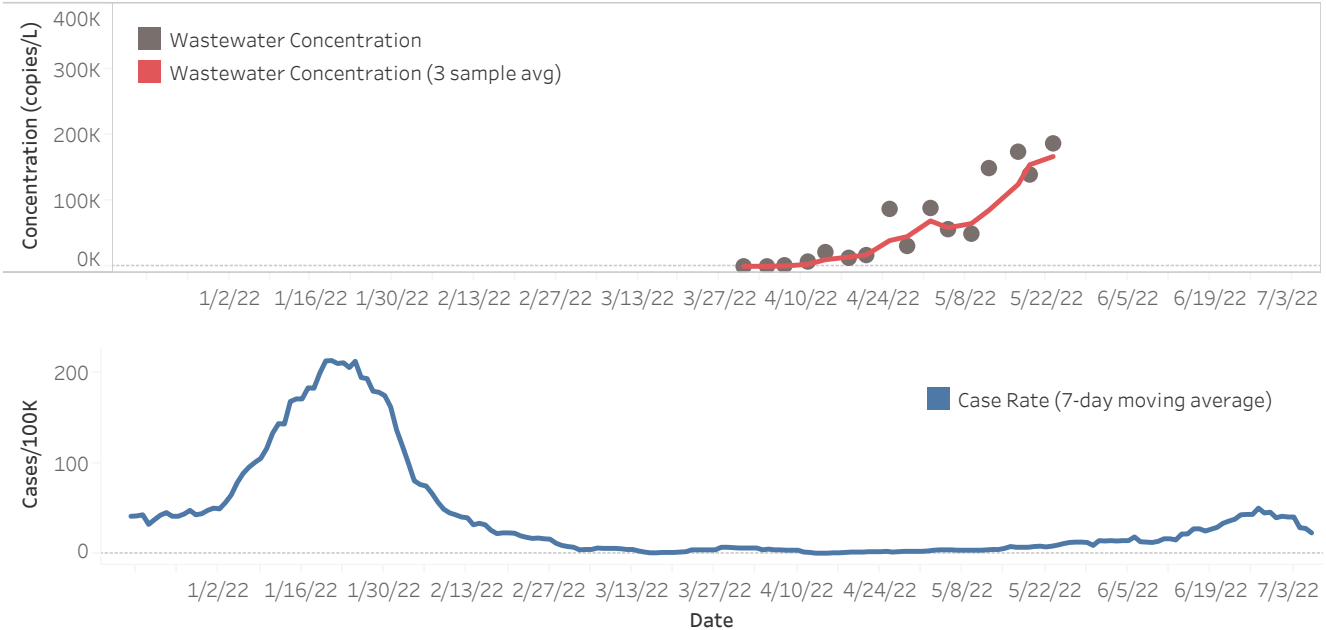
Top chart: Wastewater SARS-CoV-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

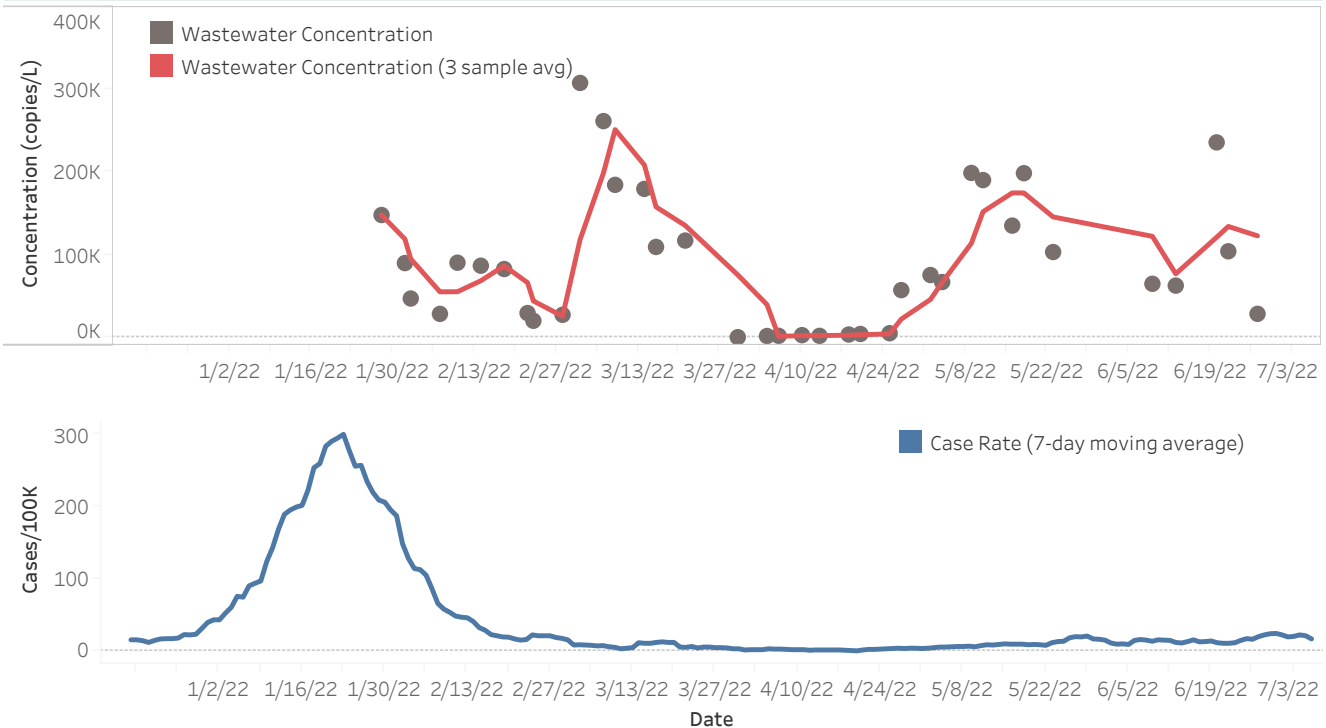
Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

North Platte WWTP (Lincoln County): SARS-CoV-2 in Wastewater and County Case Rates



Scottsbluff WWTP (Scotts Bluff County): SARS-CoV-2 in Wastewater and County Case Rates



Nebraska SARS-CoV-2 Wastewater Surveillance Report

UPDATED 7/7/2022

About the Data

All data presented are preliminary and subject to change. For each wastewater treatment plant (WWTP):

Top chart: Wastewater SARS-Cov-2 concentrations in copies per liter units. Individual sample concentrations (dots) and a rolling average of the last 3 samples (line) are shown.

Bottom chart: County-level COVID-19 case rates by lab report date (7-day rolling average of new cases per 100,000 residents).

Note: The population represented in the wastewater surveillance data (also known as a 'sewershed') does not directly match the population represented in case rates and therefore, data are not directly comparable.

Data Source: Nebraska Wastewater Surveillance System (NeWSS), Nebraska DHHS in collaboration with UNMC and UNL

Chadron WWTP (Dawes County): SARS-CoV-2 in Wastewater and County Case Rates

